

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/021085 A3

(51) International Patent Classification⁷: **A61N 5/10**

48202-3450 (US). YAN, Hui [CN/US]; Henry Ford Health System, 1 Ford Place, 4B, Detroit, MI 48202-3450 (US).

(21) International Application Number:
PCT/US2004/027893

(74) Agent: KOHN, Kenneth, I.; Kohn & Associates, PLLC, 30500 Northwestern Highway, Suite 410, Farmington Hills, MI 48334 (US).

(22) International Filing Date: 27 August 2004 (27.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/498,742 28 August 2003 (28.08.2003) US

(71) Applicant (for all designated States except US): HENRY FORD HEALTH SYSTEM [US/US]; 1 Ford Place, 4B, Detroit, MI 48202-3450 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

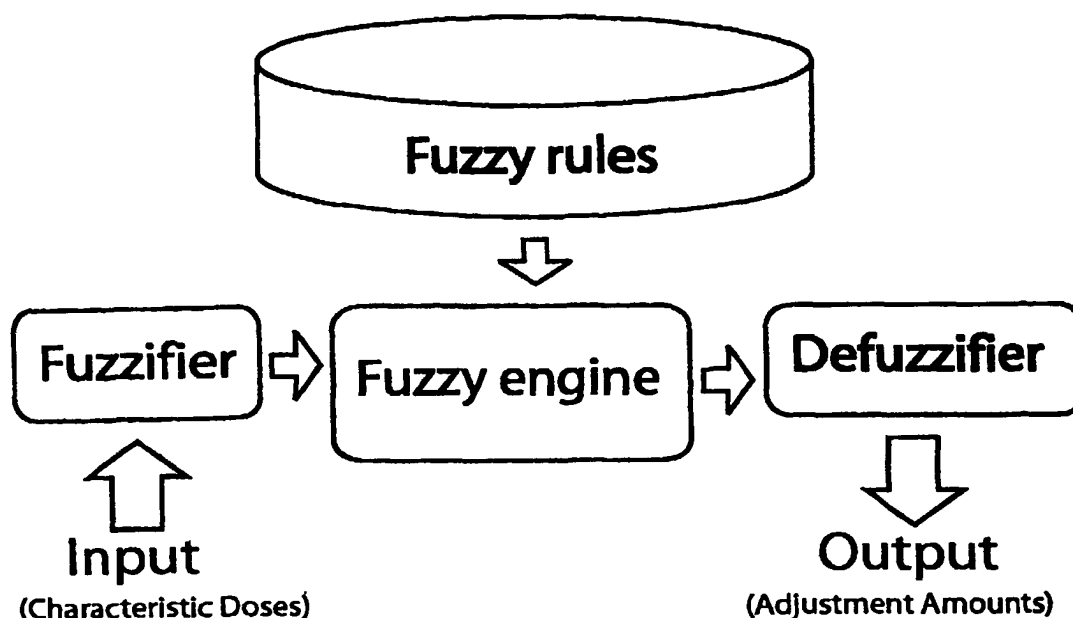
(72) Inventors; and

(75) Inventors/Applicants (for US only): YIN, Fang-Fang [CN/US]; Henry Ford Health System, 1 Ford Place, 4B, Detroit, MI 48202-3450 (US). KIM, Jae, Ho [US/US]; Henry Ford Health System, 1 Ford Place, 4B, Detroit, MI

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: FUZZY LOGIC GUIDED INVERSE TREATMENT PLANNING



(57) Abstract: A fuzzy inference system for use in modulating radiation treatment includes a fuzzifier for inputting imaging data, and inference device operatively to the fuzzifier for analyzing the imaging data and determining radiation treatment target from non-treatment target, and a defuzzifier for modulating radiation treatment pursuant to the analysis from the inference device.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
6 May 2005

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.